

## XV.

REPORTS ON THE ZOOLOGICAL COLLECTIONS MADE IN  
TORRES STRAITS BY PROFESSOR A. C. HADDON,  
1888-1889.

RHYNCHOTA FROM MURRAY ISLAND AND MABUIAG. By  
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Science and Art Museum, Dublin. PLATES XII. AND XIII.

[COMMUNICATED BY PROFESSOR HADDON.]

[Read JUNE 17, 1891.]

WHILE residing on Murray Island Professor Haddon collected a number of insects of various Orders. The Lepidoptera have already been enumerated (Proc. R. D. S., vol. vii., N. S., pt. 1., p. 1). I now give a list of the Rhynchota (Heteroptera), with descriptions of some new forms. In addition to the ten species taken on Murray Island, Professor Haddon has brought home three species of Hydrometridæ from Mabuiag; a new Limnometra; a new Halobates which he found very plentiful off the coasts of that island; and a minute insect found crawling on a coral reef, for the reception of which I have to propose a new genus. Of the Heteroptera from Murray Island two appear to be new; so that, altogether, five of the thirteen species collected by Professor Haddon have been hitherto unknown.

Sub-order.—**HETEROPTERA.**

Family.—**PENTATOMIDÆ.**

Genus.—**CHRYSOCORIS**, Hahn.

**Chrysocoris collaris** (Wlk.).

*Callidea collaris*, Walker, Cat. Het. Hemipt., Brit. Mus., pt. 1.,  
p. 40.

Twenty-one adults and four larvæ of this species were taken on Murray Island. They exhibit the variations noted by Walker,

for whilst in some the bands on the prothorax and scutellum are green and conspicuous, in others they are blue, and in others obsolete.

The larva of this insect is shortly oval in shape. The abdomen, not yet covered by the backward growth of the scutellum, is of a bright red colour, except for a broad central metallic blue band, and marginal spots of the same hue above, and dark central and lateral patches on each segment below.

The British Museum specimens are from various Austro-Malayan islands.

Genus.—*DICTYOTUS*, Dall.

***Dictyotus transversus***, sp. nov.

(Pl. XII., fig. 1.)

Head ochreous, densely punctured with black; the three lobes of equal length, a forwardly-directed spinous process on either side in front of the eyes. Eyes steel-gray. Ocelli reddish. Antennæ with first, second, and third joints ochreous; the two distal joints brown. Pronotum ochreous, with numerous black punctures, which are, however, absent from a transverse patch which is situated near the hinder margin, and occupies almost the whole width of the prothorax; two blackish markings near the anterior border. Scutellum ochreous, with black punctures which leave central and lateral clear patches at the anterior border and an apical clear patch posteriorly. Elytra ochreous, with numerous black punctures, and suffused with brown centrally; membrane black-brown. Legs ochreous, spotted with brown. Abdomen beneath dark chestnut-brown, mottled with creamy yellow, and each segment yellow laterally.

Length, 8 mm.; breadth, 4.5 mm.

A single example was taken on Murray Island. It is very closely allied to *D. lineatus*, Wlk., from South Australia, but can be readily distinguished by the clear yellow transverse stripe on the pronotum.

The genus *Dictyotus* is typically Australian; several species occur in Tasmania and one in New Zealand.

Genus.—**CEPHALOPLATUS**, White.

**Cephaloplatus spurcatus** (Wlk.).

One specimen of this North Australian species was found on Murray Island.

Genus.—**PLAUTIA**, Stal.

**Plautia affinis** (Dall.).

*Pentatoma affinis*, Dallas, List Hemipt. Insects, Brit. Mus., pt. i., p. 252.

A single example of this Australian species was captured on Murray Island.

Genus.—**MEGYMENUM**, Lap.

**Megymenum affine** (Boisd.), (*M. crenatum*, Guér.).

One individual of this species was taken on Murray Island. It occurs both in New Guinea and Australia.

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Family.—**LYGÆIDÆ**.

Genus.—**DIEUCHES**, Dohrn.

**Dieuches leucoceras** (Wlk.).

*Rhyparochromus leucoceras*, Walker, Cat. Het. Hemipt., Brit. Mus., pt. v., p. 101.

One of the specimens from Murray Island seems to me to be identical with Walker's type from Ceylon, in the British Museum.

**Dieuches obscuripes** (Wlk.).

*Rhyparochromus obscuripes*, Walker, Cat. Het. Hemipt., Brit. Mus., pt. v., p. 104.

There is a single example of this species from Murray Island. Walker's type in the British Museum is from New Guinea.

I am strongly of opinion that these two will prove mere colour varieties of a single scarce but widely-spread species.

Genus.—PHYGADICUS, Fieb.

**Phygadicus australis**, sp. nov.

(Pl. XII., fig. 2.)

Head triangular, black, punctured, and covered with numerous short, pale hairs. Eyes reddish-brown. Ocelli red. Antennæ with the third and fourth joints equal, each slightly shorter than the second, yellowish-brown. Pronotum black, straight in front, constricted slightly at the sides, and with hinder margin sinuate and yellow; its surface with numerous punctures and short pale hairs. Scutellum black, punctured and hairy, with yellow apex. Thorax beneath black, punctured and hairy, with a clear yellow mark on either side, between the middle and hind legs; acetabulæ pale-yellow. Corium and clavus hyaline with longitudinal rows of black punctures; clavus with yellow inner margin; corium with costal and central black spots, and large brown triangular patch, with black transverse band and apex, at junction with membrane. Membrane clouded across middle. Legs with femora thickened, cream-coloured, each with a broad chestnut-brown band, tibiæ and tarsi cream-colour with dark-brown annuli. Abdomen deep brown beneath, alternately black and creamy at margins. Length 6 mm.; breadth 2 mm.

Two examples of this species were taken on Murray Island. It is, I believe, the first *Phygadicus* recorded from the Australian region. It resembles *Ph. urticae* in general aspect, but the hairs on the head and thorax are less coarse; the distinct brown and black markings on the corium also distinguish it. The second and third cells on the margin of the membrane are not so clearly defined as in *Ph. urticae*.

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Family.—PYRRHOCORIDÆ.

Genus.—DYSDERCUS, Am. and Serv.

**Dysdercus papuensis** (Dist.).

One specimen was obtained on Murray Island agreeing with Mr. W. L. Distant's description of this species (Trans. Ent. Soc., Lond., 1888, p. 484). He records a specimen from this very

island. Five other specimens in Professor Haddon's collection appear to be a variety of this insect. They differ from the type in having the pronotum orange, instead of black, and in wanting the large triangular black marking on the corium. Most of them, however, show traces of this marking in small blackish patches on various portions of the area which is totally black in the type.

**Dysdercus cingulatus** (Fab.).

Five specimens of this insect, which ranges from India to Papua, were taken on Murray Island, besides larvæ in various stages of development. Three of the imagos are the ordinary orange form, one the scarlet variety, and one the small pale variety, *solenis*, Herr.-Schäff.

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Family.—HYDROMETRIDÆ.

Genus.—LIMNOMETRA, Mayr.

**Limnometra lineata**, sp. nov.

(Pl. XII., fig. 3.)

Head black, covered with fine pubescence, with two yellow longitudinal streaks above, and a yellow marking over each eye; eyes black; head beneath whitish. Rostrum creamy yellow, with black terminal joint. Antennæ black. Pronotum with its front margin slightly convex; sides slightly constricted not far behind the head, angularly prominent at the broadest part, whence the sides converge to a point forming the triangular shield; pronotum black, with fine brown pubescence; a thin yellow margin all round, except in front; two short longitudinal yellow lines just behind the head, and a long central one reaching from opposite their ends to the hinder end of the shield. Mesothorax with a whitish longitudinal line on either side, and metathorax with two similar yellow lines. Thorax with silvery pubescence beneath. Elytra and their veins sooty. Legs fuscous. Abdomen with brown lateral margins and silvery pubescence beneath.

Length, 8.75 mm.; breadth, 3.5 mm. Length of middle femur, 7 mm.; of hind femur, 7.5 mm.

This species is represented by a single individual from Mabuiag. It is allied to Mayr's *L. minuta*, but differs in its black colour and yellow markings. The last antennal joint of the specimen is, unfortunately, missing.

Genus.—HERMATOBATES,<sup>1</sup> g. n.

(Pl. XII., figs. 4-8.)

Body elongated, oval; the entire insect clothed with long, fine hairs. Head broadly triangular, rounded in front. Eyes rather small, facets large. Ocelli absent. Antennæ as long as body, four-jointed, first and second joints sub-equal, third and fourth shorter and sub-equal; a minute jointlet between the second and third, and third and fourth joints. Rostrum four-jointed, first joint long, broad; second joint the shortest, ring-like; third joint long, tapering; fourth joint narrow and pointed. Thorax, with its three divisions fused together, extending backward above, below, and at sides of abdomen, which it largely conceals; pro-, meso-, and meta-nota forming an oval, moderately convex, dorsal plate; pro- and meso-sterna forming a large and flat ventral plate; the abdomen, as viewed from above, is embraced laterally by what appear to be reflexed, backward prolongations of the thoracic epimera; only hinder edge of meta-sternum visible. Elytra and wings absent. Front acetabulæ near the central line, middle and hind acetabulæ situated laterally, the latter far back. Front legs very stout, moderately long; coxæ much thickened; trochanters thickened and bent; femora very greatly thickened, toothed; tibiæ thickened, toothed, bent at right angles from their insertion; tarsi three-jointed, proximal joint very short, distal joint thickened, with claws inserted beneath, midway in its length. Middle and hind legs of nearly equal length, longer than front pair; coxæ of both pairs very long and broad, those of hind pair reaching backward nearly as far as the extremity of the abdomen; trochanters of both pairs thickened and bent; femora of middle pair slender, of hind pair spindle-shaped; tibiæ and tarsi slender in both pairs, the latter with claws inserted just beneath their extremities. All tarsi with three claws, two stout and one fine.

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<sup>1</sup> ἔρμα, a reef; βάτης, one who treads.



Abdomen much reduced; four segments visible above, the last (male (?) genital) being button-shaped. Below, four segments at least are visible: the button-shaped terminal segment, the penultimate segment, which is visible on either side, embracing the ante-penultimate segment, which appears rounded, and as broad as long, and is embraced on either side by the segment next in front (Pl. XII., fig. 5).

The insect on which I have founded this genus was taken on a coral reef off the island of Mabuiag. Unfortunately only a single specimen was obtained. It is to be hoped that sufficient material will hereafter be forthcoming to enable the details of structure to be carefully worked out. Very possibly the description given above of the meso- and meta-thorax and abdomen will then require revision.

In general aspect the insect resembles *Halobates* and *Halobates*, but it is readily to be distinguished from them by its shorter and stouter legs, three-jointed tarsi, and differently constructed rostrum and abdomen. The legs seem more adapted for clinging or climbing on rocks than for skimming over the surface of water, though the insect is probably able to progress also in the latter way. The shape of the rostrum seems very peculiar among the *Hydrometridæ*.

My thanks are due to Dr. F. Buchanan White, who has kindly examined my rough sketches of the insect, and confirms my opinion that it is generically distinct from all described *Hydrometridæ*. It must probably be referred to a special subfamily.

I have pleasure in appending Professor Haddon's name to the type species, described below.

***Hermatobates haddonii*, sp. nov.**

(Pl. XII., figs. 4-8.)

Head and body covered with long, pale hairs. Head yellowish-brown, blackish in front. Eyes black. Antennæ fuscous with proximal part of first joint yellow. Pronotum with anterior margin yellow, and an indistinct central longitudinal yellow stripe; all the rest of the thorax blackish-brown above, except the margins of the reflexed portions on either side of the abdomen,

which are paler. Abdomen deep-brown dorsally, except the last (button-shaped) segment, which is clear yellow. Beneath, the head is brown, the prosternum blackish-brown, and all the rest of the insect dusky-yellow. Front acetabulæ, coxæ, and trochanters very pale; femur brown, yellowish beneath, with a sharp prominent black tooth at its proximal inner edge, a row of fine teeth along the edge, and a large double one near the insertion of the tibia; tibia with one strong and two small black teeth on its inner edge, and a comb-like row of bristles near its distal end. Middle and hind legs brown; middle femur with row of spines along its inner edge. All legs with numerous long pale hairs.

Length 3.3 mm.; breadth 1.3 mm. Length of anterior femur, 1.8 mm.; of middle femur, 2.3 mm.; of hinder, 2 mm. Total length of a leg of the second pair, 5.4 mm.

Genus.—HALOBATES, Eschs.

**Halobates regalis**, sp. nov.

(Pl. XIII., figs. 1-8.)

Oval; broadest behind the middle; deep blue-black above, and at sides, but with dense silvery pubescence; creamy yellow below. A pair of distinct light yellow triangular markings on the head, towards its hinder margin. Eyes rich-brown when in spirit; black when dry. Antennæ black, with proximal part of first joint light yellow; fourth joint slightly longer than third, but shorter than second. Legs black (but the femur of the first pair in the female has a clear, orange-yellow, longitudinal mark above at its proximal end, and is creamy yellow for the proximal third of its length beneath). Front tarsus with the second joint nearly twice as long as the first (Pl. XIII., fig. 5). Middle tarsus with its first joint three and a-quarter times as long as the second (Pl. XIII., fig. 6).

*Male* (Pl. XIII., figs. 1, 2). Length, 5 mm.; breadth, 2.25 mm. Length of front femur, 2 mm.; of middle femur, 5.5 mm.; of hind femur, 5 mm. Total length of a leg of middle pair, 13 mm.

The segments of the abdomen (Pl. XIII., fig. 2) are deep blue-black above; but those which are visible show a light yellow posterior margin. The last (third genital) segment is deep blue-black,



with a rounded point, and light yellow lateral margins and prominences. All the abdominal segments are of a light-yellow hue beneath. The sixth has its anterior and posterior margins straight centrally, and oblique laterally, embracing the seventh (first genital). This latter occupies about a third of the length of the whole abdomen as seen from beneath. The eighth (second genital) has its horns symmetrical and divergent, and tipped with black.

*Female* (Pl. XIII., figs. 3, 4). Length, 6 mm.; breadth, 3 mm. Length of front femur, 2 mm.; of middle femur, 5 mm.; of hind femur, 4 mm. Total length of a leg of second pair, 11 mm.

The female resembles the male in colour and markings, but is larger. The first genital segment (Pl. XIII., fig. 4) has a small central process on its hinder edge.

In both sexes the hairs of the fringe on the tibia and tarsus of the middle pair of legs are somewhat short.

*Larva*.—A good series of larvæ of this species in various stages has fortunately been secured; and I hope to be able to work out some details of the metamorphosis at a future time. The young larva is of a nearly uniform yellowish-brown colour. Later, the dark chitinous plates described by Dr. Buchanan White ("Challenger." Zoology, vol. vii., No. 3, p. 72) are apparent: three on the head and two on each thoracic and abdominal segment (Pl. XIII., fig. 8). The front femora of the immature individuals are yellow for the proximal two-thirds of their length. The front tarsi (as in other *Halobates* larvæ) have but one joint.

A number of specimens of both sexes were collected by Professor Haddon off the shores of the island of Mabuiag. The majority were obtained in October, 1888.

This species seems quite distinct from all the known species of *Halobates*. The female is slightly longer than the male, as well as broader, and seems the largest *Halobates* hitherto recorded. This species may be distinguished at a glance from the other large species (*H. wüllerstorffi*, Frauenf., *H. princeps*, White, *H. flaviventris*, Eschs., and *H. splendens*, Witl.), by the front tarsus which has its second joint nearly twice as long as the first, whilst in those species the two joints are sub-equal in length. It seems to resemble more nearly in structure *H. hayanus*, White, from the Red Sea, but is decidedly larger than the latter, and differs from it in the shape of the genital segments of the male.

The shortness of the fringe to the tibiæ and tarsi of the second pair of legs in this littoral form supports Dr. Buchanan White's suggestion (*l. c.*, p. 75) that shore species have the fringe shorter than those found on the open ocean.

It will be seen that in the insects already recorded from other localities, Austro-Malayan, and Australian forms are about equally mixed.

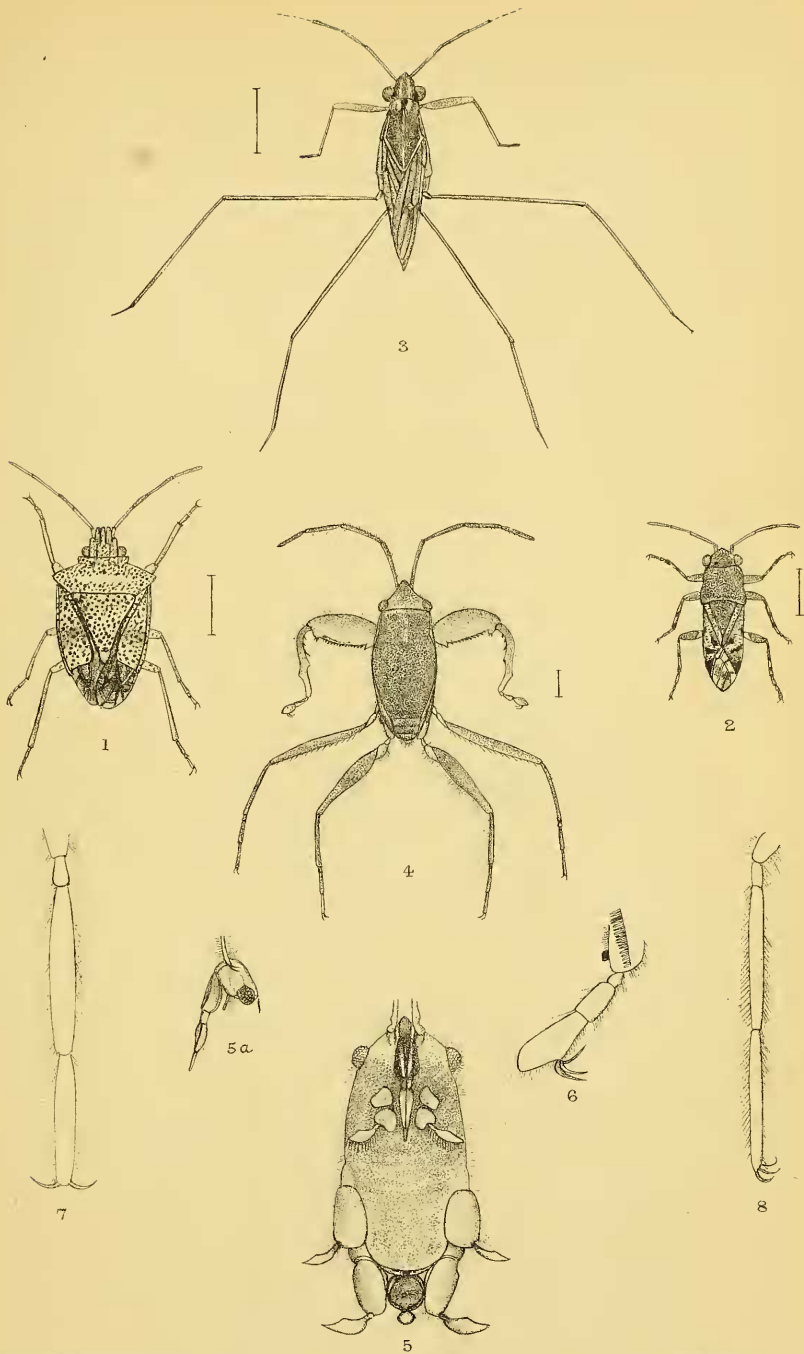
## EXPLANATION OF PLATES.

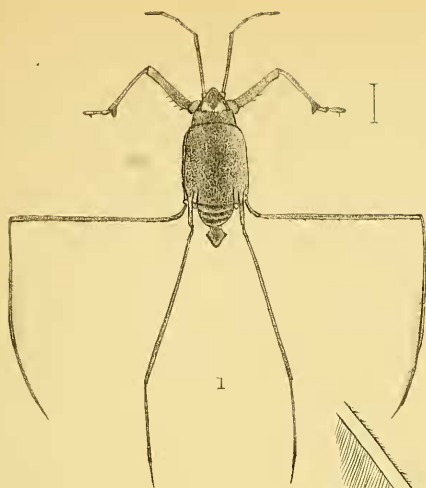
### PLATE XII.

- FIG. 1. *Dictyotus transversus*,  $\times 3$ .  
 FIG. 2. *Phygadicus australis*,  $\times 3$ .  
 FIG. 3. *Limnometra lineata*,  $\times 3$ .  
 FIG. 4. *Hermatobates haddonii*,  $\times 6$ .  
 FIG. 5.       ,,       ,,       (under surface),  $\times 12$ .  
 FIG. 5A.     ,,       ,,       head and rostrum,  $\times 12$ .  
 FIG. 6.     ,,       ,,       front tarsus (magnified).  
 FIG. 7.     ,,       ,,       middle ,,       ,,  
 FIG. 8.     ,,       ,,       hind   ,,       ,,

### PLATE XIII.

- FIG. 1. *Halobates regalis*, ♂,  $\times 4$ .  
 FIG. 2.     ,,       ,,       ,, abdominal segments from beneath,  $\times 6$ .  
 FIG. 3.     ,,       ,,       ♀,  $\times 4$ .  
 FIG. 4.     ,,       ,,       ,, abdominal segments from beneath,  $\times 6$ .  
 FIG. 5.     ,,       ,,       front tarsus (magnified).  
 FIG. 6.     ,,       ,,       middle ,,       with part of tibia (magnified).  
 FIG. 7.     ,,       ,,       hind   ,,       (magnified).  
 FIG. 8.     ,,       ,,       larva (well-grown),  $\times 4$ .





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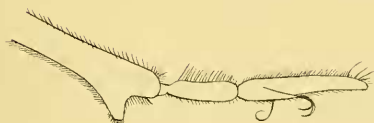
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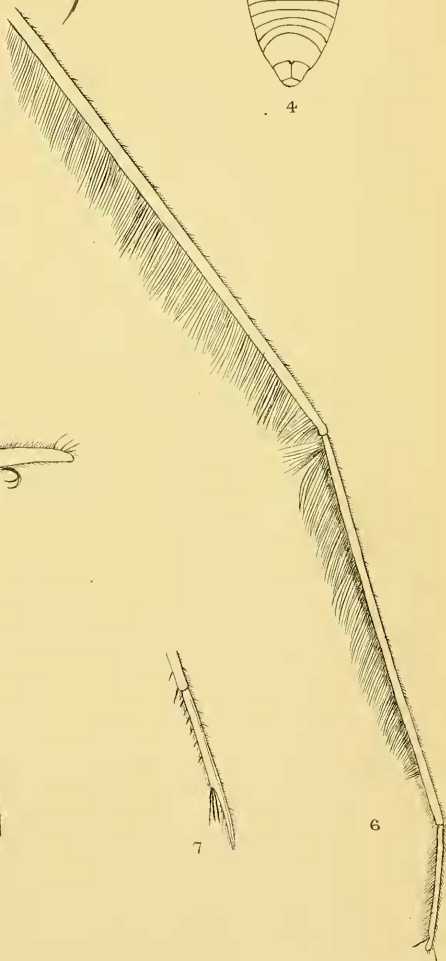
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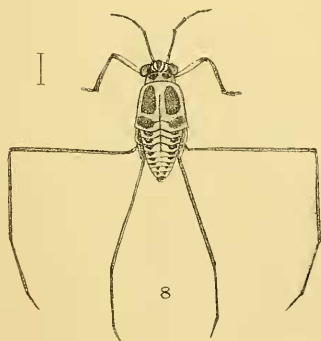
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